

IN THE CLAIMS

Listing of Claims

1. (Previously Presented) A communication terminal apparatus comprising:
 - a determination section that makes a determination of a propagation path state through which a received multicarrier signal is transmitted;
 - a specifying section that specifies a frequency band having a propagation path state that is equal to or better than a predetermined level in a frequency band used for the received multicarrier signal, according to the determination result;
 - a reporting section that transmits a report signal including frequency band information indicating the specified frequency band to a base station apparatus; and
 - an acquisition section that acquires the number of communication terminal apparatuses in a communication system to which the communication terminal apparatus belongs, wherein:
 - the reporting section repeats the report signal when the acquired number of communication terminal apparatuses is equal to or less than a predetermined value.
2. (Previously Presented) The communication terminal apparatus according to claim 1, wherein:
 - the frequency band used for the received multicarrier signal is divided into a plurality of frequency bands known to both the base station apparatus and the communication terminal apparatus;

the specifying section has a selection section that selects a frequency band having a propagation path state that is equal to or better than a predetermined level among the plurality of frequency bands; and

the reporting section transmits the report signal via the frequency band selected by the selection section.

3. (Previously Presented) The communication terminal apparatus according to claim 1, wherein the report signal includes an ACK signal or a NACK signal used for automatic repeat request control.

4. (Previously Presented) The communication terminal apparatus according to claim 3, wherein the ACK signal and the NACK signal are distinguished by a difference in pilot patterns or transmission power.

5. (Previously Presented) The communication terminal apparatus according to claim 1, wherein the communication terminal apparatus sets a transmission signal modulation scheme based on reception quality of the received multicarrier signal, and the report signal is modulated by a modulation scheme having a higher transmission rate than the modulation scheme set based on the reception quality.

6. (Previously Presented) The communication terminal apparatus according to claim 2, further comprising a generation section that generates additional information on the frequency band selected by the selection section, wherein:

the selection section selects a plurality of frequency bands having the propagation path state that is equal to or better than the predetermined level;

the generation section assigns priorities to the plurality of frequency bands selected by the selection section according to the propagation path state, and includes the priorities in the additional information; and

the reporting section reports the additional information in addition to the frequency band information to the base station apparatus.

7. (Previously Presented) The communication terminal apparatus according to claim 6, wherein the reporting section changes the pilot pattern or transmission power of the report signal according to the priorities assigned by the generation section, and reports the additional information to the base station apparatus.

8. (Previously Presented) The communication terminal apparatus according to claim 1, wherein, after the frequency band information is reported, reception processing of the received multicarrier signal is performed in the frequency band specified by the specifying section.

9. (Previously Presented) The communication terminal apparatus according to claim 1, further comprising:

an identifying section that identifies a type of data mapped on the received multicarrier signal; and

a control section that stops part of a circuit for a predetermined time period when the identified data type corresponds to data that is successively transmitted from the base station apparatus or data for which a reception error within a predetermined range is allowed.

10. (Previously Presented) The communication terminal apparatus according to claim 1, further comprising:

a determining section that determines whether or not the reception apparatus is in a static state; and

a control section that stops part of a circuit for a predetermined time period when the reception apparatus is determined to be in the static state.

11. (Canceled).

12. (Previously Presented) The communication terminal apparatus according to claim 1, wherein the determining section performs one of estimation of the propagation path fluctuation of the received multicarrier signal and reception quality measurement of the received multicarrier signal to determine the propagation path state of the received multicarrier signal.

13. (Previously Presented) The communication terminal apparatus according to claim 2, wherein a plurality of subcarrier signals included in the frequency band are assigned to the communication terminal apparatus and other communication terminal apparatuses in advance.

14. (Previously Presented) The communication terminal apparatus according to claim 2, wherein the report signal is subjected to code division multiplexing.

15. (Previously Presented) A base station apparatus comprising:

an acquisition section that acquires from a communication terminal apparatus, frequency band information indicating a frequency band having a propagation path state that is equal to or better than a predetermined level among a plurality of frequency bands, into which a frequency band used for a transmission multicarrier signal is divided and which are known to both the base station apparatus and the communication terminal apparatus; and

a transmitting section that transmits a signal to the communication terminal apparatus via the frequency band indicated by the frequency band information, wherein:

the transmitting section instructs each of a plurality of communication terminal apparatuses on a repetition number of the frequency band information in accordance with the number of accommodated communication terminal apparatuses.

16. (Previously Presented) The base station apparatus according to claim 15, wherein the acquisition section comprises:

an identifying section that identifies the frequency band through which a signal is transmitted from the communication terminal apparatus; and

a judging section that judges that the identified frequency band is the frequency band having the propagation path state that is equal to or better than the predetermined level.

17 and 18. (Canceled).

19. (Previously Presented) The communication terminal apparatus according to claim 1, wherein the reporting section transmits the report signal when a frequency band assigned to a communication terminal apparatus is updated.

20 and 21. (Canceled).

22. (Previously Presented) The base station apparatus according to claim 15, wherein: the acquisition section acquires a priority of the propagation path state of the frequency band in addition to the frequency band information from each of the plurality of communication terminal apparatuses; and

the transmitting section determines a frequency band to assign to a signal for each communication terminal apparatus based on the frequency band information and the priority of the propagation path state of the frequency band.

23. (Previously Presented) The base station apparatus according to claim 22, wherein the transmitting section reports the determined frequency band to each communication terminal apparatus before transmitting a signal to each communication terminal apparatus.

24. (Previously Presented) The base station apparatus according to claim 23, wherein the transmitting section transmits the report signal via the determined frequency band.

25. (Previously Presented) The base station apparatus according to claim 22, wherein the transmitting section assigns a lower frequency band in a carrier center frequency for a communication terminal apparatus having a higher priority.

26. (Canceled).

27. (Previously Presented) The base station apparatus according to claim 15, wherein the acquisition section performs the acquiring when updating the frequency band assigned to the communication terminal apparatuses.

28. (Previously Presented) A reception method in a communication terminal apparatus, the method comprising the steps of:

determining a propagation path state through which a received multicarrier signal is transmitted;

specifying a frequency band having a propagation path state that is equal to or better than a predetermined level in a frequency band used for the received multicarrier signal, according to the determination result;

transmitting a report signal including frequency band information indicating the specified frequency band to a base station apparatus; and

acquiring the number of communication terminal apparatuses in a communication system to which the communication terminal apparatus belongs, wherein:

the step of transmitting repeats the report signal when the acquired number of communication terminal apparatuses is equal to or less than a predetermined value.

29. (Previously Presented) A transmission method in a base station apparatus, the method comprising the steps of:

from a communication terminal apparatus, acquiring frequency band information indicating a frequency band having a propagation path state equal to or better than a predetermined level among a plurality of frequency bands, into which a frequency band used for a transmission multicarrier signal is divided and which are known to both the base station apparatus and the communication terminal apparatus; and

transmitting a signal to the communication terminal apparatus via the frequency band indicated by the frequency band information, wherein:

the step of transmitting instructs each of a plurality of communication terminal apparatuses on a repetition number of the frequency band information in accordance with the number of accommodated communication terminal apparatuses.